IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s):	V.N. Kumar et al.
Case:	1-1
Serial No.:	10/620,258
Filing Date:	July 15, 2003
Group:	2453
Examiner:	LaShanya R. Nash
Title:	Traffic Generator with Enhanced Burst Modeling Feature

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REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The remarks which follow are submitted in response to the Examiner's Answer dated June 9, 2009 in the above-identified application. The arguments presented by Appellants in the corresponding Appeal Brief dated April 10, 2009, are hereby incorporated by reference herein.

In the Examiner's Answer at pages 15-18, the Examiner responds to various arguments raised by Appellants in the Appeal Brief. In this Reply Brief, Appellants have conformed to Examiner's enumeration of remarks solely to aid in identifying sections of the Examiner's Answer. This should not be construed as any admission that claims which the Examiner has chosen to address as a group should stand or fall together; rather, Appellants continue to respectfully request that the Board consider the patentability of each claim argued separately in the Appeal Brief on its own merits.

ARGUMENT

Remark I (pages 15-16 of the Answer)

Appellants respectfully note that the limitation of claim 1 at issue recites accumulating compensatory traffic over one or more of the time intervals for which the first type of traffic is generated, and generating the traffic burst based at least in part on the accumulated compensatory traffic. Appellants note that in arguing on page 5 of the Answer that Smith meets this limitation, the Examiner omits both instances of the word "compensatory" from this limitation, and thereby mischaracterizes the limitation at issue.

In an illustrative embodiment described in the specification at, for example, page 6, lines 17, to page 7, line 2, "[u]tilizing the compensatory burst model of the illustrative embodiment, . . . if a certain time interval witnesses a shortage of packet arrivals, packet bursts may be viewed as eventually compensating the shortage, such that a particular level of packet flow is maintained over a longer period of time." See also the specification at, for example, page 8, lines 13-21, with reference to FIG. 3.

By contrast, the portion of Smith cited on page 15, last paragraph, of the Answer, namely, column 6, lines 30-64, discloses an arrangement wherein, "the number of packets in each category (i.e., having normally or lognormally distributed interarrival times)" which pass through a switch is measured. Then, "number generators each generate" a series of values, where the "total number of values generated by each generator is typically equivalent to the number of data packets having normally distributed interarrival times (for the normal number generator) and to the number of data packets having lognormally distributed interarrival times (for the lognormal number generator)." Thus, the generated traffic will be identical to the measured traffic. Thus, Smith fails to teach or suggest any arrangement which includes compensatory traffic of the type recited in claim 1.

St. Hontas fails to remedy this deficiency of Smith with regard to the limitation of claim 1 at issue, and hence the proposed combination of Smith and St. Hontas fails to teach or suggest every limitation of claim 1.

Remark II (pages 16-17 of the Answer)

The Examiner apparently contends that Smith indicates that the autocorrelative technique is "somewhat inferior to some other product for the same use," quoting *In re Gurley*, 27 F.3d 551, 554, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994)). See the Answer at page 16, last paragraph. Appellants note that Smith at column 1, line 57, to column 2, line 3, in fact states that the autoregessive model has been "largely unsuccessful" and a "failure" in characterizing the bursty nature of ATM traffic. As such, Appellants respectfully submit that this precisely the sort of teaching away described in *Gurley*, 27 F.3d at 553, 31 USPQ2d at 1131: "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." Again, one skilled in the art faced with the teachings of Smith explicitly indicating failure of the autoregressive model in the ATM context, would clearly not look to modify the Smith arrangements with an ATM traffic generator based on autoregressive techniques as described in St. Hontas.

Remark III (page 17 of the Answer)

In the Answer, the Examiner argues with regard to dependent claim 6 that "Bae expressly discloses for a cell to enter a network that the particular cell must obtain a token, and if there is no token then the cell must wait in the queue until a new token is generated (page 177; column 1, paragraph 3). Therefore, according to the teachings of Bae, a cell will have to enter a queue in the case where the threshold value for tokens has not been reached and tokens are continued [sic] to be generated, but there is no token currently available."

Appellants note that the limitation at issue in claim 6 specifies that the step of generating the second type of traffic further comprises determining, for each of one or more time intervals, if an amount of the traffic of the first type generated during that interval is less than a comparison level, and if so, adding an amount of compensatory traffic to a burst container having a capacity given by a burst size.

The Examiner appears to argue that this limitation is met by the teachings of Bae wherein "a cell will have to enter a queue in the case where . . . there is no token currently available."

Appellants respectfully submit that this would only occur where the number of cells arriving during an interval is greater than the number of tokens in the token pool, and hence clearly would not meet the limitation of claim 1 directed to determining, for each of one or more time intervals, if an amount of the traffic of the first type generated during that interval is less than a comparison level, and if so, adding an amount of compensatory traffic to a burst container having a capacity given by a burst size.

Appellants again note that, in the technique disclosed by Bae, if the number of cells arriving during an interval is less than the number of tokens in the token pool, all of the arriving cells will be able to immediately obtain a token from the token pool and hence will be able to immediately enter the network without waiting in the queue until a new token is generated. In other words, if a number of cells arriving during an interval is less than the number of tokens in the token pool, no traffic is added to the queue. Traffic will only be added to the queue if the number of cells arriving during an interval is greater than the number of tokens in the token pool.

Remark IV (page 18 of the Answer)

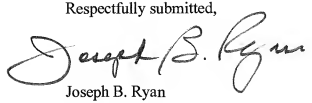
In the Answer, the Examiner merely repeats the assertion in the final Office Action at page 4, last paragraph, with regard to dependent claim 13, that "Bae expressly discloses allowing for a certain degree of burstiness to further enforce control of the traffic flow. Additionally, Bae discloses that the traffic flow is controlled through the distribution of tokens, which creates bursts that maintain an average input rate of the traffic. Clearly, it can be determined that in order to maintain an average input rate, that the bursts must correspond to the amount of traffic entering the network, which is inclusive of reductions or increases."

Appellants respectfully maintain that the portions of Bae cited in the final Office Action do not teach generating traffic bursts in the manner recited in claim 13. More particularly, Appellants respectfully submit that Bae at page 175, left column, lines 30-58, is directed to proposed definitions of burstiness. Page 176, left column, lines 45-62, is directed to investigations of statistical multiplexing of bursty sources, and more specifically how the cell loss probability and the average delay time varies as a function of various parameters, such as the number of sources, the peak bit rate, and the burstiness of the sources.

Thus, Bae fails to teach or suggest generating traffic bursts in a manner which tends to compensate for temporary reductions in the amount of traffic of another type so as to substantially maintain a particular level of traffic flow, as recited in claim 13.

In view of the above, Appellants respectfully maintain that claims 1 and 3-21 are in condition for allowance, and again request the reversal of the §103(a) rejections.

Respectfully submitted,



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